

Appl. No. 10/031,759  
Response dated May 6, 2005  
Reply to Office action of February 7, 2005

### REMARKS

#### **I. Introduction**

Applicants submit herewith a Revocation of Power of Attorney with New Power of Attorney executed by Ji-Huan Pack, as the inventor and on behalf of the assignee of the present invention. The new Power of Attorney appoints the practitioners associated with Customer Number 38485 as the attorneys of record for the above-identified application. Applicants therefore respectfully requested that all future correspondence regarding this application be sent to the undersigned at the address below.

The present amendment is in response to the Office Action dated February 7, 2005. Claims 1-13 are currently pending in the application. In response to the restriction requirement previously issued by the Examiner, Applicants have elected to prosecute the inventions of claims 1-9. Therefore, claims 10-13 have been withdrawn as being drawn to a non-elected invention. Claims 1-9 have now been rejected. Independent claim 1 has been amended to include the recitations of now canceled claim 4. No new matter has been added.

The Examiner states that the IDS filed on January 12, 2002 fails to comply with 37 C.F.R. 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent. Applicants submit herewith an IDS and PTO form 1449, along with a copy of each cited reference, and requests that these documents be considered by the Examiner and made of record in the above-referenced application.

#### **II. The Rejections Under 35 U.S.C. §102 Should Be Withdrawn**

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Claims 1-3 and 6-9 have been rejected under 35 U.S.C. § 102(b) as being unpatentable in view of U.S. Patent 5,967,771 to Chen *et al.* ("Chen"). As stated above, independent claim 1 has been amended to include the recitations of now canceled claim 4. In particular, applicants have amended independent claim 1 to recite that the claimed regenerative oxidizer, for removal of pollutants from waste gas, comprises, *inter alia*, a rotor which consists of a rotor cylinder having multiple distribution wings, a rotor cover surrounding the distribution wings and an outlet hole connected to the outlet duct. Accordingly, for at least this reason, Chen does not teach or suggest each and every element of amended independent claim 1.

Therefore, in view of the foregoing, reconsideration and withdrawal of the rejection of claims 1-3 and 6-9 as anticipated by Chen is respectfully requested.

### **III. The Rejections Under 35 U.S.C. §103 Should Be Withdrawn**

Claims 4 and 5 have been rejected under 35 U.S.C. §103 as being unpatentable in view of Chen, further in view of U.S. Patent 6, 298,877 to Inuki *et al.* ("Inuki"). The Examiner alleges that it would have been obvious to modify the invention of Chen with a rotor as taught by Inuki to provide a means for distributing the gas stream.

To establish obviousness of a claimed invention all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974). As stated above, Chen fails to teach or suggest all the recitations of independent claim 1. Furthermore, Inuki does not teach or suggest all the recitations of independent claim 1. The differences are apparent by comparison of Figure 4 of the present application with Figure 4A of Inuki.

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Inuki discloses a regenerative oxidizer in which the rotor 50 is supported by a hollow shaft 51 and is mounted on a lower casing 44B. The rotor is tapered in the downward direction such that a space S is formed between the rotor 50 and the lower portion of the upper casing 44A. (See Inuki col. 6 lines 11-35). Exhaust gas is supplied by a pipe 45 to the upper casing 44A and passes from the exterior of the rotor 50 through the exhaust gas supply opening 31a of the rotary valve 30 into the housing. (See Inuki col. 6 lines 51-56). The exhaust gas is then treated in the housing using heat accumulators and a combustion chamber. The treated gas then passes through the rotor via the discharge opening 31c and out the opening at the bottom rotor 58 through the discharge pipe 47. (See Inuki col. 6 line 50 - col.7 line 2).

In contrast, amended independent claim 1 of the present invention recites a regenerative oxidizer, for removal of pollutants from waste gas comprising, *inter alia*, a rotor which consists of a rotor cylinder having multiple distribution wings, a rotor cover surrounding the distribution wings and an outlet hole connected to the outlet duct. For example, as shown in Figure 4, the rotor 200 is disposed within the distribution cylinder 110 at the center of the housing and includes: a rotor cylinder 220 having multiple distribution wings 210; a rotor cover 250 surrounding the distribution wings; a lower outlet hole 222 connected to an outlet duct 1b; and a driving means for rotating the rotor at a specified velocity. Waste gases are introduced into the rotor via an inlet duct 1a and distributed to, e.g., a separator, heat media bed, catalyst bed and/or a combustion chamber by the distribution wings 210. (See Specification, Figure 2). The purified gases then pass through the lower outlet hole 222 to the inner section of the rotor cylinder and

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are discharged via the outlet duct 1b. Thus, rotation of the rotor controls lateral flow of waste and purified gases in and out of the rotor. Consequently, the present invention is different from both Chen and Inuki in construction, flow and treatment of waste and treated gases.

Even assuming, *arguendo*, that the cited references could be modified to obtain the presently claimed invention, the mere fact that references might be modified is not enough to constitute obviousness unless the prior art also suggests the desirability of the modification. Moreover, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art, and not be based on the Applicant's disclosure. See *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Neither Chen nor Inuki teach or suggest a regenerative oxidizer as recited in independent claim 1 of the present invention. Furthermore, neither reference suggests the desirability of modifications to obtain the regenerative oxidizer as recited in amended independent claim 1.

Therefore, it is respectfully submitted that the Examiner has failed to set forth a *prima facie* case of obviousness with respect to independent claim 1. As claim 5 depends from claim 1, this dependent claim is patentable for at least the same reasons. In view of the foregoing, reconsideration and withdrawal of the rejection of claim 5 as obvious in view of Chen and Inuki is respectfully requested.

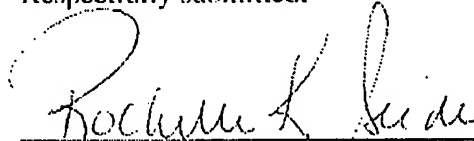
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IV. Conclusion

In view of the foregoing, Applicants respectfully submit that pending claims 1-3 and 5-9 are now in a condition for allowance. Prompt consideration and allowance are therefore respectfully requested.

Applicants believe that no fees are required in connection with this response. However, if a fee is required, the Commissioner is hereby authorized to charge payment, to Deposit Account No. 01-2300.

Respectfully submitted.



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### FEE CALCULATION

Any additional fee required has been calculated as follows:

☒ If checked, "Small Entity" status is claimed.

	(Column 1)	(Column 2)	(Column 3)	SMALL ENTITY			LARGE ENTITY	
	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADD'L FEE	OR	RATE	ADD'L FEE
TOTAL CLAIMS	12 MINUS	20	--0-	x \$25	\$-0-		x \$50	\$
INDEP CLAIMS	2 MINUS	3	--0-	x \$100	\$-0-		x \$200	\$
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEP. CLAIM				+ \$180	\$-0-	OR	+ \$360	\$
					\$-0-			\$

The U.S. Patent and Trademark Office is hereby authorized to charge and deficiency or credit any overpayment of fees associated with this communication to Deposit Account No. 01-2300 referencing docket number 027707.00002.